

ABSTRACT OF THE DISCLOSURE

A device and a method for etching a substrate, in particular a silicon body, by using an inductively coupled plasma. A high-frequency electromagnetic alternating field is generated using an ICP source, and an inductively coupled plasma composed of reactive particles is generated by the action of a high-frequency electromagnetic alternating field on a reactive gas in a reactor. In addition, a static or time-variable magnetic field is generated between the substrate and the ICP source, for which purpose at least two magnetic field coils arranged one above the other are provided. The direction of the resulting magnetic field is also approximately parallel to the direction defined by the tie line connecting the substrate and the inductively coupled plasma. Finally, a first component magnetic field is generated with a first magnetic field coil, and a second component magnetic field which is equally strong at an equivalent site is generated with a second magnetic field coil, the two component magnetic fields being oriented in opposite directions.

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